

REMARKS

Reconsideration of this application, as amended, is respectfully requested. The following remarks are responsive to the Office Action mailed February 28, 2005.

Double Patenting

Claims 21-40 are provisionally rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claims 15-31 of copending Application No. 09/023172 and claims 18-30 of copending Application No. 09/023234. Accordingly, a terminal disclaimer is filed herewith. Therefore, Applicant submits that the double patenting rejection has been overcome.

Claim Rejections**35 USC §112 Rejections**

Claims 21 and 30 are rejected under 35 USC §112, first paragraph, as failing to comply with the written description requirement. However, in light of the amendments to claims 21 and 30 herein, it is submitted by Applicant that the rejection has been overcome.

35 USC §103 Rejections

Claims 21-40 are rejected under 35 U.S.C. 103(a) as being unpatentable over U.S. Patent 4,045,781 to Levy et al. in view of U.S. Patent 5,319,591 to Takeda et al. Specifically, it is asserted in the Office Action that Levy teaches a memory module having devices of "diverse characteristics" (col. 2, lines 20-43). Levy does not define what is meant by the term "diverse characteristics", but instead illustrates what is meant

by the term "diverse characteristics" by way of example. Specifically, Levy discloses that the memory module may contain magnetic core memory units or semiconductor random access memory units.

However, Levy does not describe whether the magnetic core or semiconductor random access memory units may have different signal impedance or operating voltage requirements from those of the system memory bus, as presently claimed by Applicant in claims 21 and 30. Moreover, Levy does not describe whether the memory module contains a controller that may allow data to be communicated between the system memory bus and the memory units regardless of any difference between the signal impedance or operating voltage of the system memory bus and the memory units, as presently claimed in claims 21 and 30.

One may pontificate whether the magnetic core and semiconductor random access memory units of Levy may have different impedance or operating voltage characteristics, but Levy does not teach or suggest whether they do in fact have different impedance or operating voltage characteristics nor whether the memory controller in the memory module enables data communication between the system memory bus and the memory units regardless of any difference in impedance or operating voltage between the memory units and the system memory bus, as in presently amended claims 21 and 30. Therefore, Levy cannot be used as a basis for the rejection under 35 USC §103(a) of claims 21 and 30.

Similarly, Takeda does not teach a memory controller in the memory module of Takeda that enables data communication between the system memory bus and the memory units regardless of any difference in impedance or operating voltage between

the memory units and the system memory bus, as in presently amended claims 21 and 30. As the Office Action states, Takeda suggests that it is an object to provide an improved memory module having a structure or arrangement which can be manufactured without regard to compatibility in temperament or characteristics between the respective memory devices. However, Takeda does not suggest what exactly those temperament or characteristics are nor whether they are different from the system memory bus to which the memory module of Takeda is to be coupled. Takeda only mentions in column 5, lines 11-45 (as cited in the Office Action), that the memory devices within the memory module may have different "voltage noise" magnitudes or waveforms from each other.

Therefore, Takeda may not be used as a basis for a rejection under 35 USC §103(a) of presently amended claims 21 and 30, nor does the combination of Levy and Takeda teach presently amended claims 21 and 30. Furthermore, nothing within either Levy or Takeda suggests or provides motivation for combining the two references, such that the combination of Levy and Takeda would teach that which is claimed in presently amended claims 21 and 30.

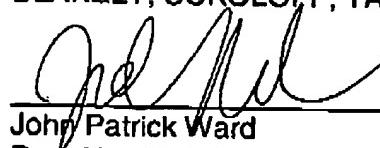
Accordingly, Applicant respectfully submits that the rejection of claims 21 and 30, as presently amended, is overcome and that claims 21-40 are now in condition for allowance.

Please charge any fees due to our Deposit Account No. 02-2666.

Respectfully submitted,

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